

VOLKOVA, E. D.

"Esters du choline et de ses homologues." by S. I. Lurje, Z. I. Fedorova and l'étudiant
E. D. Volkova. (739)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1941, vol 11, no 9.

VOLKOV, E. D.

Transformation of the allyl ether of gualacol into eugenol.
V. N. Belov and E. D. Volkova. *Doklady Akad. Nauk*
S.S.S.R. 93, 1037-40 (1953). Data obtained in the study of
conversion of allyl gualacyl ether (I) into eugenol (II) indi-
cate that the Claisen rearrangement proceeds by a catalyzed
intermolecular C-allylation mechanism, although the co-
presence of an intramol. reaction is not excluded. Heating
200 g. I in dry MePh with 50 g. dry askanite in 92° leads to
exothermic reaction (130°) and yields: gualacol, *o*-eugenol
(b_p 114-15°, *n*_D²⁰ 1.5393; *p*-nitrobenzoate, m. 96-7°), *p*-
eugenol (*n*_D²⁰ 1.5401; *p*-nitrobenzoate, m. 78.8-6.0°), *o*-
isoeugenol (m. 78.3°; benzoate, m. 71-2.6°), and a
little *m*-isomer (m. 94.5-5.3°; cf. Pomeranz, *Chem. Zentr.*
1, 800 (1901); Behal and Tiffeneau, *C.A.* 2, 1827). In
all, 12.6% *p*-eugenol, 28.8% *o*-isomer were obtained.
The residue gave some crude diallylgualacol, b_p 137°.
*n*_D²⁰ 1.5437; also recovered were: allyl ether of diallyl-
gualacol, b_p 129-50°, *n*_D²⁰ 1.5407, *d*₄²⁰ 1.0389, and a sub-
stance, b_p 52-4°, with thiocyanate bromine no. 105, which
after distn. over Na, b_p 170-6°, *n*_D²⁰ 1.5140, *d*₄²⁰ 0.8973, and
the analysis of which indicates the compn. C₁₁H₁₂O, oxidation
of this with KMnO₄ gave mixed tunic acids. G. M. K.

VOLKOVA, Ye.D.; BELOV, V.N.; LUR'YE, S.I.

Preparation of isoeugenol from 4-oxy-3-methoxypropiofenone.
Trudy VNIISNDV no.2:42-45 '54. (MLRA 10:7)
(Isoeugenol) (Propiofenone)

Volkova, Ye. D.

BELOV, V.M.; VOLKOVA, Ye. D.

Synthesis of n-eugenol. Trudy VNIISNDV no.2:45-53 '54. (MLRA 10:7)
(Eugenol)

VOLKOVA, Ye.D.; BELOV, V.N.

Method for separating the isomers of eugenol. Trudy VNIISNDV
no.2:53-55 '54. (MLRA 10:7)
(Eugenol)

VOLKOVA, Ye.D.; BELOV, V.N.

C-allylation of guaiacol by allyl alcohol. Trudy VNIISNDV no.2:56-57
'54. (MLRA 10:7)

(Guaiacol) Allyl alcohol)

VOLKOVA, Ye. I. (Phys)

VOLKOVA, Ye. I. (Phys) - "Significance of Chronic Tonsillitis in the Development and Prognosis of Pneumatism in Children." Sub 22 Dec 52, Second Moscow State Medical Inst imeni I. V. Stalin. (Dissertation for the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

VOIKOVA, Ye.I.

Relation of chronic tonsillitis to rheumatism in children. *Pediatrics*,
Moskva no.4:18-23 July-Aug 1953. (CJML 25:1)

1. Of the Department of Faculty Pediatrics (Scientific Supervisor -- Prof.
D. D. Lebedev), Second Moscow Medical Institute imeni I. V. Stalin.

VOLKOVA, Yu.I.

Role of oral hygiene in the treatment of rheumatism in children.
(MLRA 7:3)
Pediatriia no.1:3-7 Ja-P '54.

1. Iz kafedry fakul'tetskoy pediatrii II Moskovskogo meditsinskogo
instituta im.I.V.Stalina (zaveduyushchiy kafedroy P.A.Ponomareva).
(Rheumatism) (Mouth)

VOLKOVA, Ye.I.

Clinical aspects of chronic tonsillitis in children. Sov.med. 17 no.11:
33-35 N '53. (MLRA 6:12)

1. Iz kafedry fakul'tetskoy pediatrii (nauchnyy rukovoditel' - professor
D.D.Lebedev, ispolnyayushchiy obyazannost' zaveduyushchego kafedroy
P.A.Fonamareva) II Moskovskogo meditsinskogo instituta im. I.V.Stalina.
(Tonsils--Diseases) (Children--Diseases)

VOLKOVA, Ye.I.
LEBEDEV, D.D.; VOLKOVA, Ye.I.

[Chronic tonsillitis and heart diseases in children] Khronicheski
tonsillit i zabolevaniia serdtsa u detei. Moskva, Medgiz, 1957.
118 p. (MIRA 11:1)

(TONSILS--DISEASES) (HEART--DISEASES) (CHILDREN--DISEASES)

EYGES, Nadezhda Romanovna; VOLKOVA, Ye.I., red.; MARKOVA, T.A., red.;
MIKHAYLOVA, L.V., red.; PANFILOVA, T.S., red.; SLAVINA, L.S.,
red.; ZAGIK, L.V., red.; NOVOSELOVA, V.V., tekhn. red.

[Prevention of nervousness in children] Opreduprezhdenii detskoi
nervnosti. Moskva, Izd-vo Akad. pedagog. nauk RSFSR, 1962. 15 p.
(MIRA 15:6)

(CHILDREN—CARE AND HYGIENE)

TARASOVA, Ol'ga Titovna; SVADKOVSKIY, I.F., red.; VOLKOVA, Ye.I., red.; VORZHETSOVA, L.N., red.; MARKOVA, T.A., red.; MIKHAYLOVA, L.V., red.; PANFILOVA, T.S., red.; SLAVINA, L.S., red.; ZAGIK, L.V., red.; GARNEK, V.P., tekhn. red.

[How to protect children from common colds] Kak uberech' detei ot prostudy. Moskva, Izd-vo APN RSFSR, 1963. 15 p.
(MIRA 16:12)

VOLKOVA, Ye.I., inzh.; KHIRIN, N.D., inzh.; BARYSHNIKOV, A.P., inzh.;
KOCHEVNIKOV, G.A., inzh.; KHOKHRIN, K.G., inzh.; BABKOV, V.A.,
inzh.; VNUKOV, A.K., kand.tekhn.nauk

Starting clutch for draft and blowing machinery and pit mills.
Teploenergetika 8 no.6:31-32 Je '61. (MIRA 14:10)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i
ratsionalizatsii elektrostantsiy.

(Clutches (Machinery))
(Electric power plants--Equipment and supplies)

VOLKOVA, Ye. I.

USSR/ Chemistry - Catalysts; Sulfuric
Acid

1 Sep 53

"Catalytic Activity of Metals and of Platinum-
Gold Alloys in Respect to the Oxidation of Sulfur
Dioxide," G. K. Boreskov, M. G. Slin'ko, and Ye. I
Volkova

DAN SSSR, Vol 92, No 1, pp 109,110

Studies the catalytic activity of Cr, Rh, Pd, Ag,
W, Pt, Au, and of an alloy consisting of 5% Au and
95% Pt on the oxidation of SO_2 . Most of the above
metals had a low activity due to their instability
under the conditions of the reaction. At 560° Pt
is more active than Au, but the Pt-Au alloy has a
low activity. Refutes the conclusions of D. A.
Dowden, Chem Soc, Issue 1, 245, 1950. Presented
by Acad M. M. Dubinin 3 Jul 53.

274T12

VOLKOVA, Ye. I.

VOLKOVA, YE. I.

AID P - 3699

Subject : USSR/Electricity
Card 1/1 Pub. 29 - 4/25
Authors : Vnukov, A. K., Ye. I. Volkova and Yu. V. Pavliv, Engs.
Title : Measuring the temperatures of drums of high pressure
boilers during the firing
Periodical : Energetik, 12, 10-11, D 1955
Abstract : According to the circulars of the Technical Administration
of the Ministry of Electric Power Stations 4/T52 and
T1/54, the firing of high pressure boilers has to be done
in such a way, that the temperature differences between
the hottest and coldest parts of the boiler drums do not
exceed 30° to 50° C. The authors present a simplified
method of measuring drum temperatures. Three drawings.
Institution : None
Submitted : No date

VOLKOVA, Ye.I., dotsent

~~Causes of relapses~~ in rheumatism in tonsillectomized children.
Sov.med. 25 no.12:103-107 D '61. (MIRA 15:2)

1. Iz detskogo sanatornogo otdeleniya (rukovoditel' - doktor meditsinskikh nauk A.V. Dolgopolova, nauchnyy konsul'tant - zasluzhennyy deyatel' nauki prof. D.D.Lebedev) Nauchno-issledovatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Nesterov) na baze detskogo sanatoriya No.57.
(RHEUMATIC FEVER) (TONSILS SURGERY)

VOLKOVA, Ye. I.

Importance of chronic focal infection in the course of rheumatism
in children in a local sanatorium. *Pediatrics* 41 no.3:22-26 '62.
(MIRA 15:2)

1. Iz sanatornogo detskogo otdeleniya (zav. - prof. A. V. Dolgopolova) Nauchno-issledovatel'skogo instituta revmatizma M Ministerstva zdavookhraneniya RSFSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A. N. Nesterov, nauchnyy rukovoditel' - prof. D. D. Lebedev) na baze detskogo sanatoriya No. 57 Mosgorzdrava (Glavnyy vrach L. F. Poteyenko)

(RHEUMATIC FEVER) (FOCAL INFECTION)

VOLKOVA, Ye. M.

"The Natural Copper Content in Food Products." Sub 26 Mar 51,
Second Moscow State Medical Institute I. V. Stalin.

Dissertations presented for science and engineering degrees in
Moscow during 1951.

SO: Sum. No. 480, 9 May 55

VOLKOVA, Ye.M., MOSKVINA, T.N., MEL'NIKOVA, N.A., BEREGOVSKAYA, Z.G.

Problem of organizing an effective diet. Vop.pit. 17 no.5:81-83
S-O '58 (MIRA 11:10)

1. Iz kafedry gigiyeny pitaniya (zav. - dots. A.N. Yunusov) Kazanskogo
meditsinskogo instituta.

(DIET,

balanced diet arrangement (Rus))

VOLOKOVA, YE. N.

KAGAN, I.S., dots.; ZAYTSEV, Kh.P., dots.; SNAGOVSKAYA, N.S., kand.
tekh.nauk; VOLKOVA, Ye.N., inzh.; VOLOKH, I.A., inzh.

Economic evaluation of the use of pellets in blast furnace
smelting. Izv.vys.ucheb.zav.; chern.met. 2 no.6:145-154
Je '59. (MIRA 13:1)

1. Dnepropetrovskiy metallurgicheskiy institut, Rekomendovano
kafedroy ekonomiki promyshlennogo Dnepropetrovskogo metallurgi-
cheskogo instituta.
(Blast furnaces) (Sintering)

KAGAN, I.S.; VOLKOVA, Ye.N.

Metallurgical value of iron ores as a basis for the establishment
of a wholesale price list for these ores. Izv. vys. uchët. zav.;
chern. met. 4 no.8:187-194 '61. (MIRA 14:9)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Iron ores--Prices)

VOLKOVA, Ye.N.

Petrographic characteristics of the Kuma horizon of the Gubden tectonic salient in southern Daghestan. Izv. vys. ucheb. zav.;
neft' i gaz 3 no.5:27-33 '60. (MIRA 15:6)

1. Groznenskiy neftyanoy institut.
(Daghestan—Petrology)

URANOV, A.A.; VOLKOVA, Ye.N., red.; SMIRNOVA, M.I., tekhn. red.

[Programs of pedagogical institutes; summer field work in botany for natural science faculties] Programmy pedagogicheskikh institutov; letniaya uchebno-polevaya praktika po botanike dlia fakul'tetov estestvoznaniia. [Moskva] Uchpedgiz, 1956. 14 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i srednikh pedagogicheskikh uchebnykh zavedeniy.
(Botany--Study and teaching)

VOLKOVA, Ye.N.

Anatomy of the leaf in desert ephemerals. Uch. zap. MOPI 79:59-71
'60. (MIRA 14:9)

(Leaves--Anatomy) (Desert flora)

MEDVEDEV, I.A.; GLIKMAN, E.S.; BEL'GOL'SKIY, B.P.; VOLKOVA, Ye.N.;
STARODUBSKIY, D.F.; LIKHACHEV, Ye.N.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620010-7"

Methods of determining the effect of the volume of output on the
magnitude of general plant expenditures and metallurgical plant
production costs. Izv. vys. ucheb. zav.; chern. met. 6 no.6:
209-213 '63. (MIRA 16:8)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Iron industry) (Steel industry)

VOLOCHOV, Ye.N.

Characteristics of the development of desert ophiasterids in
Moscow. Trudy Inst. bot. Ak. Nauk. SSSR 4097-116 '58,
(MIRA 17:8)

ACC NR: AP7006229

(A, N)

SOURCE CODE: UR/0078/67/012/001/0062/0067

AUTHOR: Rashkovich, L. N.; Koptsik, V. A.; Volkova, Ye. N.; Izrailenko, A. N.;
Plaks, E. M.

ORG: Physics Department, Moscow State University (Fizicheskiy fakul'tet, Moskovskiy
gosudarstvennyy universitet)

TITLE: Some properties of aqueous solutions of $\text{NH}_4\text{H}_2\text{PO}_4$ and $\text{ND}_4\text{D}_2\text{PO}_4$

SOURCE: Zhurnal neorganicheskoy khimii, v. 12, no. 1, 1967, 62-67

TOPIC TAGS: ammonium phosphate, deuterium compound, deuterium oxide

ABSTRACT: The solubility of $\text{NH}_4\text{H}_2\text{PO}_4$ (ADP) and $\text{ND}_4\text{D}_2\text{PO}_4$ (D-ADP) and the density, refractive index and conductance of their aqueous solutions were studied in order to make use of the corresponding concentration and temperature relationships for the control of the crystallization process. The deuterated compound was prepared by successive crystallizations of ADP from heavy water. The solubility of ADP and D-ADP was found to be linearly related to the temperature: $\sigma = 26.21 + 0.4463 t$, and the solubility of D-ADP in D_2O surpasses that of ADP in H_2O by about 8%. A plot of the density of the ADP and D-ADP solutions versus their concentration gave a linear dependence. The refractive index data are described by the linear relationships

$$n_{\text{ADP}} = 1.3309 + 0.00138c,$$

$$n_{\text{D-ADP}} = 1.3285 + 0.00138c.$$

Card 1/2

UDC: 546.39'185--384.1.04+549.39'11.2'185--384.1.04

ACC NR: AP7006229

At all the concentrations studied, the specific conductance χ of ADP and D-ADP solutions changed linearly with temperature (between 25 and 70°C). Because of the lower mobility of D^+ ions as compared to H^+ , the conductance of saturated D-ADP solutions is much less than that of ADP solutions. Using the relationships established in the study, the authors grew homogeneous single crystals of ADP and D-ADP for research purposes. The authors thank A. V. Shubnikov for discussing the results and Ya. I. Ryskin for analyzing the IR spectra and determining the degree of deuteration of D-ADP crystals. Orig. art. has: 5 figures and 3 tables.

SUB CODE: 07/ SUBM DATE: 03Feb65/ ORIG REF: 005/ OTH REF: 006

Card 2/2

SHCHUKIN, Ivan Semenovich; VOLKOV A, Ye.P., red.

[General geomorphology] Obshchaya geomorfologiya. Moskva, Izd-vo Mosk. univ., Vol.2. 1964. 563 p.
(MIRA 18:2)

VOLKOVA, Ye.S.

A person possessing a noble spirit. Vest. sviazi 22 no.12:27
D '62. (MIRA 16:1)
(Mineral waters)

VOLKOVA, Ye. V.

~~Notes on~~ Notes on *Hocquartia manshuriensis* (Kom.) Nakai. Bot. nat. Gerb.
16:77-83 '54. (MIRA 3:9)
(Climbing plants)

VOLKOVA, E. Y.

②
1
// α -(4-Carboxy-3-cyclohexenyl)acrylates and their hydrogenation products. A. V. Yakubovich and E. V. Volkova, U.S.S.R. 78,446, Dec. 31, 1949. $\text{CH}_2=\text{CHC}(\text{CO}_2\text{H})\text{CH}=\text{CH}_2$ is treated with Ni carbonyl in the presence of alc. and HCl, and the products are hydrogenated and thereby converted into α -(4-carboxycyclohexyl)acrylate and propionate. M. Hosh-

11-5-54
ml

to JOE

VOLKOVA, Ye. V.

"Investigation of the Reaction of Nickel Carbonyl With Acetylene Hydrocarbons." S Thesis
for degree of Cand. Chemical Sci. Sub 31 Oct 50, Inst of Organic Chemistry, Acad Sci
USSR

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in
Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

USSR/Chemistry - Acetylene Derivatives 21 Jun 52

"The Reaction of Nickel Carbonyl With Monoalkyl Acetylenes," A. Ye. Yakubovich, Ye. V. Volkova

"Dok Ak Nauk SSSR," Vol LXXXIV, No 6, pp 1183-1186

The investigation was concerned with detg the laws governing the reaction between nickel carbonyl and monoalkyl acetylenes. Expts were carried out with methyl-, butyl-, and vinyl acetylene, and dipropargyl. It was found that the reactivity of the 2 reagents toward each other decreases, as the mol wt of the acetylene hydrocarbon increases, so that the temp required for reaction increases with the mol wt.

223724

Addn of nickel carbonyl takes place according to Markovnikov's rule, i.e., the single reaction product will always be a deriv of α -substituted acrylic acid, according to the formula $4RC_2CH_3 + Ni(CO)_4 + R'OH + 2HCl \rightarrow C-COOH + NiCl_2 + H_2$. Dipropargyl, in contrast to the other compds, does not react well, giving a small yield of an ester of a monocarboxylic acid which contains an ethylene bond. It was not studied further. Presented by Acad A. N. Nesmeyanov.

223724

VOLK VA, YE. V.

TABLE I BOOK INFORMATION

REV/5084

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958.
Biology, nonliving substances. [3-4] Radiolabeling of polymers, particularly in the field of Soviet Science. 4. Chemistry of Radio-
elements and Radioactive Transformations. Moscow, Akademiya, 1959. 352 p.
5,000 copies printed. (Soviet Text Only)

Ms. (Title page): A. P. Vinogradov, Academician; Ed.: V. I. Lashovskiy, Prof. M. I.
B. I. Kozlov.

REMARKS: This collection of articles is intended for scientists and engineers
interested in the applications of radioactive materials in science and
industry.

CONTENTS: The book contains 26 separate studies concerning various aspects of
the chemistry of organic radioactive elements and the processes of radiation
effect on matter. Some reports discuss present-day methods of reproducing
irradiated nuclear fuel, research in the chemistry of energy, boron,
uranium, plutonium, and americium, problems related to the origin and history
of radioactive matter, the radiolysis of aqueous solutions and of
organic compounds, the mechanism of polymer chain grafting, and the effect
of radiation on natural and synthetic rubbers. V. I. Lashovskiy edited the
present volume. Most of the reports are accompanied by references. Con-
tributors to individual investigations are mentioned in annotations to
the Table of Contents.

TABLE II

L. I. Lashovskiy, L. I. Lashovskiy, and M. I.

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5(1); 21(5) PAGE 1 BOOK EXTRACT FROM SW/7-900
Abstracts sent SLEN. Abstracts per analytical laboratory desired

Prismatolite radiocarbon isotope a analytical chemistry bulletin
(see of Radiocarbon Isotope in Analytical Chemistry) Moscow
No. 10, 1968, 366 p. [Series: New Series, 5, 9 (12
Issue also included. 3,000 copies printed.

May, M.I. I.P. Alimov. Corresponding member, USSR Academy
of Sciences. Institute of Publishing House A.M. Technological Trade
No. 1, 5, 1968, 1968.

Prismatolite. The book is intended for scientists and chemical
engineers concerned with work in analytical chemistry.

Prismatolite. The book is a collection of the principal papers
presented at Moscow at the Second Conference on the Use of
Radiocarbon Isotope. The problems discussed at the
conference included separation, aging, and solubility
of prismatolite, determination of the instability constants
and λ_1 .

TABLE OF CONTENTS:

Use of Radiocarbon Isotopes (Cont.) SW/7-900

Brick, A.A. and I.I. Muratova. Methodology of
Using Radiocarbon Isotopes for the Process
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Baril, I. Ya., B.V. Bobrovich, O.S. Lortzova,
and V.I. Morozov. Pyrochemical Methods for the
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Kovalev, E.I. and T.M. Rubina. Use of the Tagged
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carbons 349

Krasovskiy, L.A., V. V. Volynova, and P. V. Zimakov.
Use of the Radiocarbon Isotope G-13 for the Quanti-
tative Determination of the Content of Benz-
ene in the Gasoline Isomers in Technical Grade Benz-
olene 356

End 9/10

FOKIN, A.V.; VOLKOVA, Ye.V.; SOROKIN, A.D.

Utilization of energy of ionizing radiations in the process of polymerization of trifluoroethylene. Polymerization of trifluoroethylene in block and in the medium of chlorine-containing solvents. Khim.nauka i prom. 4 no.6:806-807 '59. (MIRA 13:8)

(Ethylene)

(Polymerisation)

(Gamma rays)

82356

s/063/60/005/001/009/009

5.3831

AUTHORS: Fokin, A. V., Volkova, Ye. V., Sorokin, A. D.

TITLE: On the Use of the Energy of Ionizing Radiation in the Process of Copolymerization of Trifluorochloroethylene With Various Monomers

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleeva, 1960, Vol. 5, No. 1, p. 120

TEXT: The possibility was shown of radiation copolymerization¹⁹ of trifluorochloroethylene with various perfluorinated and partially fluorinated olefines and also with ethylene oxide. Vinylidene fluoride, perfluoropropylene, tetrafluoroethylene and ethylene oxide were used as second components in the copolymerization under the action of γ -radiation. The experiments were carried out at room temperature in metal ampoules made of β Q-1T (EYa-1T) stainless steel. The copolymerization of trifluorochloroethylene with vinylidene fluoride was carried out in the molar ratio $CF_2 = CFC1 : CH_2 = CF_2$ from 3 : 1 to 1 : 3 at a dose intensity of 14-16 r/sec and a dose of 2-3 million r. Under these conditions practically the complete conversion of both monomers is obtained. The radiation-chemical yield is 3-5,000 molecules per 100 ev. The copolymer obtained is sufficiently resistant against alcohols, various oils and nitric acid; it is

Card 1/2

82356

S/063/60/005/001/009/009/

On the Use of the Energy of Ionizing Radiation in the Process of Copolymerization of Trifluorochloroethylene With Various Monomers

soluble in diethyl ether, acetone and esters. The copolymers of trifluorochloroethylene with perfluoropropylene, trifluorochloroethylene with tetrafluoroethylene and the polymer of vinylidene fluoride were obtained under analogous conditions. A copolymer of trifluorochloroethylene with ethylene oxide was obtained under the action of γ -radiation of Co^{60} . There are 3 tables and 3 references: 2 Soviet and 1 American. X

SUBMITTED: September 30, 1959.

Card 2/2

s/089/60/009/005/012/020
B006/B070

AUTHORS: Krasnousov, L. A., Zimakov, P. V., Volkova, Ye. V.

TITLE: Radiochemical Chlorination⁹ of Benzene[^]

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 5, pp. 412 - 414

TEXT: The radiative chlorination of benzene was studied under standard conditions in order to study the possibility of using nuclear radiations for the production of hexachlorane.[^] As can be seen from the Table, the different radiations led to the formation of hexachloro-cyclohexane (HCCH) characterized by a high content of alpha phase. In addition to data on thermal, chemical (benzene peroxide), and infrared chlorination, the Table gives the following data:

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Radiochemical Chlorination of Benzene

S/089/60/009/005/012/020
B006/B070

| Concentration g chlorine/100g C ₆ H ₆ | t°C | γ-Isomer % | α-Isomer % | Mean energy ev |
|--|-----|---------------|---------------|--|
| Ultraviolet (3650A)14.0 | 40 | 11.3 | 73.8 | 3 - 5 |
| β: (3.48 rad/sec, total: 2.4·10 ⁴ rad)14.0 | 40 | 10.2 | 78.5 | 0.4·10 ⁶ |
| γ: (6.75 rad/sec, total: 2.4·10 ⁴ rad)14.0 | 40 | 11.8 | 83.5 | 1.2·10 ⁶ -1.3·10 ⁶ |

On the contrary, the content of α-isomer on chemical chlorination is only 63.7%. The chlorination was done for pure substance and for solution in CCl₄. The β source was Sr⁹⁰, and the γ source, Co⁶⁰. The radiochemical yield of the reaction was 853,000 per 100 ev; it was, however, strongly dependent on the purity of the starting material. If industrially pure benzene is used, the yield is only 130,000. The ultraviolet yielded 9000 molecules per 100 ev. The radiative chlorination rate is proportional to the square of radiation intensity (benzene without solvent). In CCl₄ solution, the rate of reaction is essentially lower.

Card 2/3 .

Radiochemical Chlorination of Benzene

S/089/60/009/005/012/020
B006/B070

Radiative chlorination of benzene is possible also at low temperatures in solid phase; the total yield increases with decreasing temperature down to -80°C . Chlorination remains incomplete for temperatures still lower (at -120°C , the content of tetrachlorocyclohexane reaches 58%). The effect of temperature on the isomeric composition of HCCH was also studied. While the total yield of HCCH has its maximum at -80°C , the content of α -isomer decreases from 83.5 to 38% for the fall of temperature from 40 to -190°C . The yield of γ -isomer also depends on the concentration of chlorine. The formation probabilities of α -, β -, γ -, δ -, and ϵ -isomers were calculated to be 27.8, 4.63, 25.0, 26.0, and 16.7%, respectively. There are 4 figures, 1 table, and 3 references: 1 Soviet, 1 German, and 1 Polish.

SUBMITTED: March 31, 1960

Card 3/3

87528

S/079/60/030/012/012/027
B001/B064

5.3300

AUTHORS: Yakubovich, A. Ya. and Volkova, Ye. V.
TITLE: Synthesis of Vinyl Monomers. XI: Reaction of Vinyl Acetylene
With Nickel Carbonyl: 1-vinyl cyclohexene-3-dicarboxylic
Acid-1,4 and Its Derivatives
PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12,
pp. 3972-3978

TEXT: The authors found already previously that in the reaction of some
alkyl acetylenes with nickel tetracarbonyl in alcoholic media, α -alkyl
acrylates form by the Markovnikov rule. Therefore, in the reaction of
vinyl acetylene with $\text{Ni}(\text{CO})_4$ in alcoholic media the formation of α -vinyl

acrylates was to be expected: $4\text{CH}_2=\text{CH}-\text{C}(\text{COOR})=\text{CH}_2 + \text{Ni}(\text{CO})_4 + 2\text{HCl}$

+ $4\text{ROH} \longrightarrow 4\text{CH}_2=\text{CH}-\text{C}(\text{COOR})=\text{CH}_2 + \text{NiCl}_2 + \text{H}_2$. The authors, however, found
that instead of the esters, their dimers form. Esters of dicarboxylic acid

Card 1/3

87528

Synthesis of Vinyl Monomers. XI. Reaction of Vinyl Acetylene With Nickel Carbonyl: 1-vinyl cyclohexene-3-dicarboxylic Acid-1,4 and Its Derivatives

S/079/60/030/012/012/027
B001/B064

$C_8H_{10}(COOH)_2$ were the resulting reaction products. By determining the parachors [Abstracter's note: the coefficient P is meant in the empirical formula $\sqrt{\sigma} = \frac{P(d-\delta)}{M}$] of the individual ester dimers and their dihydro- and tetrahydro derivatives, the dimer was clearly identified as a cyclic derivative. Since, however, the calculated values of this kind for compounds with six- and four-membered cycles and their difference are within the experimental error limit, the structure had to be chemically confirmed. A number of chemical experiments showed that the ester dimers obtained which are formed in the reaction of vinyl acetylene with $Ni(CO)_4$ are derivatives of vinyl cyclohexene dicarboxylic acid, and that this reaction into alcohol media is accompanied by the formation of the esters of 1-vinyl cyclohexene-3-dicarboxylic acid-1,4 (I). In a paper (Ref. 3) published after this paper had been finished, the structure of α -(4-carbethoxy cyclohexene-3-yl)-acrylic acid is wrongly ascribed to the final product of the above reaction. This error is proven by the identity of vinyl cyclohexene dicarboxylic acid obtained by the authors with the

Card 2/3

87528

Synthesis of Vinyl Monomers. XI. Reaction of Vinyl Acetylene With Nickel Carbonyl: 1-vinyl cyclohexene-3-dicarboxylic Acid-1,4 and Its Derivatives S/079/60/030/012/012/027 B001/B064

acid obtained (Scheme 2) by saponifying the diene condensation product of 2-cyanobutadiene (Ref. 4). In the catalytic hydrogenation of the esters of 1-vinyl cyclohexene-3-dicarboxylic acid-1,4, 2 hydrogen atoms are added to the latter in the first stage, and derivatives of 1-ethyl cyclohexene-3-dicarboxylic acid-1,4 form. In the following, more difficult, hydrogenation two further hydrogen atoms are added so that finally, derivatives of 1-ethyl cyclohexane-1,4-dicarboxylic acid result. Esters, acid chlorides, amides, and other derivatives described in the experimental part were obtained from the acids. There are 9 references: 4 Soviet, 3 US and 2 German. X

SUBMITTED: January 11, 1960

Card 3/3

35437

S/081/62/000/004/074/087
B138/B110

112214

AUTHORS: Zimakov, P. V., Volkova, Ye. V., Fokin, A. V., Sorokin, A. D.,
Belikov, V. M.

TITLE: Use of nuclear radiation energy in the process of the
polymerization of fluoro-olefines

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 557, abstract
4P24 (Sb. "Radioakt. izotopy i yadern. izlucheniya v nar.
kh-ve SSSR, v. 1. M.", Gostoptekhizdat, 1961, 219-226)

TEXT: The processes of the separate and combined radiation polymerization
of tetrafluorethylene and trifluorchlorethylene have been investigated with
the aim of eliminating some of the deficiencies in existing methods of
fluoro-olefine polymerization. It has been found that tetrafluorethylene
and trifluorchlorethylene can easily be polymerized under various
temperature conditions and mediums with comparatively low radiation
intensities. The resulting polymers have a high degree of purity. The
possibility of producing various fluoro-copolymers by radiation is
demonstrated. Both radiation polymerization and radiation vulcanization
might be carried out in the case of fluor-containing rubbers. [Abstracter's
note: Complete translation.]
Card 1/1

VOLKOVA, Ye.V.; FOKIN, A.V.; BELIKOV, V.M.

Polymerization of tetrafluoroethylene by the action of gamma
rays. Zhur.VKHO 6 no.1:113-114 '61. (MIRA 14:3)
(Ethylene) (Gamma rays) (Polymerization)

ACCESSION NR: AP4037294

S/0190/64/006/005/0964/0964

AUTHORS: Volkova, Ye. V.; Skobina, A. I.

TITLE: Radiation polymerization of hexafluoropropylene in the liquid and solid phases

SOURCE: Vysshemolekulyarnyye soyedineniya, v. 6, no. 5, 1964, 964

TOPIC TAGS: hexafluoropropylene polymerization, liquid phase, radiation polymerization, cobalt 60

ABSTRACT: The effect of gamma-irradiation by Co60 on hexafluoropropylene was investigated within a temperature range of 77-303K in the liquid and solid phases of the monomer, and also at the point of phase transition. A dosage of 600 rad/sec. was used. It was shown that polymerization of hexafluoropropylene in the liquid and solid phases at various temperatures and at identical dosage did not produce sharp changes in the rate of the process. The rate did not change when the polymerization was conducted at the point of phase transition. It was found that the index of the polymerization rate as related to the radiation intensity changes with temperature and is equal to 1 at 298K to 0.5-0.6 at 195K, and to 0.4 at 77K. The change in the activation energy in relation to the polymerization

Card 1/2

ACCESSION NR: AP4037294

temperature is represented in a graph showing that the magnitude and sign of the activation energy undergo a change within the temperature interval of 263-195K. The radiochemical yield changes with the intensity of radiation, but is almost independent of the temperature. The products of hexafluoropropylene transformation under the effect of Co^{60} γ -radiation proved to be a low-molecular polymeric fluid which is being currently isolated and analyzed by the authors. Orig. art. has: 1 graph.

ASSOCIATION: none

SUBMITTED: 03Feb64

DATE ACQ: 09Jun64

ENCL: 00

SUB CODE: MT

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AP4012280

S/0070/64/009/00170102/0103

AUTHORS: Gal'perin, Ye. L.; Dubov, S. S.; Volkova, Ye. V.; Mlenik, M. P.

TITLE: The crystalline structure of polytrifluorochloroethylene

SOURCE: Kristallografiya, v. 9, no. 1, 1964, 102-103

TOPIC TAGS: chloroethylene, crystal structure, x ray diffraction, crystal pulling, polymer, camera RKV 86A

ABSTRACT: The authors undertook this work because of contradictions in the literature on the cell dimensions and chain configuration of this compound. They obtained precisely oriented samples of the polymer by pulling in glycerin at 150-160°. The samples were then heated in their extended state for 10 hours at 190-195°. X-ray patterns were obtained on cylindrical film in an RKV-86A camera. The pictures are characterized by lines of the first and second levels and by an absence of equatorial reflections. The lines of the second level correspond to hexagonal packing. The value of the lattice constant was determined to be $a = 6.385 \pm 0.015$ Å. Along the axis of the crystal fiber, $c = 42 \pm 0.2$ Å. Seventeen monomer units are packed along this line, indicating a crystal density of.

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ACCESSION NR: AP4012280

$2.20 \pm 0.02 \text{ g/cm}^3$, which is in good agreement with experimental density measurements. The absence of equatorial reflections and the presence of intense, almost point, reflections at lines of the first, second, and third layers indicates that the first reflection should be referred to (101), not to (100) as has been done in previous work. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 09Apr63

DATE ACQ: 19Feb64

ENCL: 00

SUB CODE: SS, dE

NO REF SOV: 003

OTHER: 005

Card 2/2

L 23299-66 EMT(m)/ETC(f)/EPF(n)-2/ENG(m)/EWP(j)/T/EWA(h)/ETC(a)-5/EWA(1)
DS/WW/GG/RM

ACC NR: AP6012920

SOURCE CODE: UR/0020/66/167/005/1057/1059

AUTHOR: Volkova, Ye. V.; Zinakov, P. V.; Fokin, A. V.

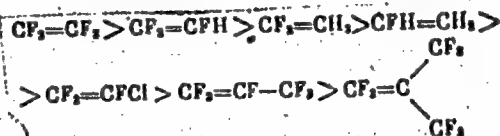
ORG: none

TITLE: Radiation-induced polymerization of fluoroolefins

SOURCE: AN SSSR. Doklady, v. 167, no. 5, 1966, 1057-1059

TOPIC TAGS: fluoroolefin, polymerization, radiation induced polymerization

ABSTRACT: A study has been made of the kinetics of the radiation-induced polymerization of certain fluoroolefins in the gaseous, liquid, and solid phases at -196 to 80 C, at dose rates of 6-600 rad/sec and doses of 0.012 to 250 Mrad. The results are given in graphic and tabular form. It was found that in order of decreasing polymerization rate the fluoroolefins studied arranged themselves as follows:



Study of the effect of temperature showed that the reaction rate increases only up to a certain temperature, after which it decreases. Orig. art. has: 1 table and 2 figures. [SM]

SUB CODE: 07/ SUBM DATE: 26Jun65/ ORIG REF: 005/ OTH REF: 004/ ATD PRESS: 4736
Card 1/1. FY UDC: 547.539.14

L 32834-66 EWT(m)/T/EWP(j) WW/GG/RM

ACC NR: AR6000273

SOURCE CODE: UR/0081/65/000/014/S019/S019

AUTHOR: Volkova, Ye. V.; Zimakov, P. V.; Fokin, A. V.; Sorokin, A. D.;
Skobina, A. I.; Belikov, V. M.

TITLE: Radiation polymerization of fluoroolefins

SOURCE: Ref. zh. Khimiya, Abs. 149109

TOPIC TAGS: olefin, polymer, radiation polymerization, radiation effect, polymerization

ABSTRACT: A study was made of the bulk polymerization of tetrafluoroethylene, ¹trifluoroethylene, difluoroethylene, trifluorochloroethylene and monofluoroethylene at temperatures ranging from 20 to -78C with exposure to ⁶⁰Co γ -radiation in doses of 1--50 rad/sec. Under these conditions, solid high-molecular polymers were obtained. The bulk polymerization rate was found to decrease in the above order. Certain peculiarities of the processes investigated connected with the products of monomeric radiolysis in the secondary processes leading to the development of active products and connected with the heterogeneity of processes, were determined. Characteristics of radiation polymerization in bulk of hexafluoropropylene ¹(I) in the liquid and solid phases are given. It has been found that the conversion of I occurs at

Card 1/2

L 32834-66

ACC NR: AR6000273

the same rate in the liquid (-78C) and the solid (-196C) phases, as well as at the phase transition point (-156C). As the temperature increases from -78C to 40C, the speed of the process increases. The polymerization of I in the bulk occurs with the formation of polymer fluids with a mol.wt from 400 to 4000. A., Sorokin. [Translation] [NT]

SUB CODE: 11, 07/

SUBM DATE: none

Card 2/2

ACC NR: AT6034055

(A)

SOURCE CODE: UR/0000/66/000/000/0109/0114

AUTHOR: Volkova, Ye. V.; Zimakov, P. V.; Fokin, A. V.; Sorokin, A. D.; Belikov, V. M.; Bulygian, L. A.; Skobina, A. I.; Krasnousov, L. A.

ORG: none

TITLE: Radiation polymerization of fluoroolefins

SOURCE: Simpozium po radiatsionnoy khimii polimerov. Moscow, 1964. Radiatsionnaya khimiya polimerov (Radiation chemistry of polymers); doklady simpoziuma. Moscow, Izd-vo Nauka, 1966, 109-114

TOPIC TAGS: radiation polymerization, halogenated organic compound, polymerization kinetics, reaction mechanism

ABSTRACT: Results of the authors' previously published studies on radiation polymerization of unsaturated fluorine-containing compounds are reviewed, explaining certain characteristics of the process associated with the effects of the electronegative fluorine atom, heterogeneous process conditions and radiolysis products. Tetrafluoroethylene is distinguished by its rapid polymerization under ionizing irradiation, with complete monomer conversion in three hours at -78°C in liquid phase polymerization with 10 rad/sec radiation, and in ten minutes at $+20^{\circ}\text{C}$. The yield of 7×10^6 molec/100ev is the highest known for radiation chemical reactions.

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ACC NR: AT6034055

Progressive substitution of the fluorine atoms by hydrogen or chlorine or by trifluoromethyl groups reduces polymerization rate and yields: perfluoroisobutylene will not polymerize. Thus the rate of radiation polymerization decreases in the series: $CF_2 = CF_2 > CF_2 = CFH > CF_2 = CH_2 > CFH = CH_2 > CF_2 = CFC1 > CF_2 = CF-CF_3 > CF_2 = C(CF_3)_2$. A kinetics study showed that the polymerization of tetrafluoroethylene under heterogeneous conditions proceeds by a radical mechanism, but the kinetics are more complex than in chemical polymerization due to the effect of radiolysis products. The effect of temperature on radiation bulk polymerization rates of trifluorochloroethylene, vinylidene fluoride and tetrafluoroethylene showed the rates increased to a maximum at certain temperatures: these maxima and the corresponding energies of activation are 35°C at 10 rad/sec, -6.8 kcal/mol; 50°C at 6 rad/sec, -9 kcal/mol; 70°C at 6 rad/sec, -18.7 kcal/mol, respectively. Secondary processes with the radiolysis products start to occur at higher temperatures. Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 25Jul66/ ORIG REF: 015/ OTH REF: 003
///

Card 2/2

ACC NR: AT6034056

(A)

SOURCE CODE: UR/0000/66/000/000/0114/0118

AUTHOR: Sorokin, A. D.; Volkova, Ye. V.; Fokin, A. V.; Zimakov, P. V.

ORG: none

TITLE: Radiation bulk and solution polymerization of trifluorochloroethylene

SOURCE: Simpozium po radiatsionnoy khimii polimerov. Moscow, 1964. Radiatsionnaya khimiya polimerov (Radiation chemistry of polymers); doklady simpoziuma. Moscow, Izd-vo Nauka, 1966, 114-118

TOPIC TAGS: radiation polymerization, mixed halogenated organic compound, polymerization kinetics

ABSTRACT: The radiation polymerization trifluorochloroethylene (TFC1E) was studied at different irradiation dosages over a wide temperature range. There is no polymerization at -196°C ; at -78°C the yield of a low molecular weight product is only 20 molec/100ev; in the range from -20 to $+60^{\circ}\text{C}$ the energy of activation of the reaction changes from 3.1 to -6.8 . As radiation dosage increased, the temperature at which the maximum process rate was attained also increased. As temperature is increased from 10 to 50°C , the polymerization rate and polymer molecular weight increased; at higher temperatures, the rate and molecular weight decrease. Reaction mechanisms are discussed. Solution polymerization of TFC1E was studied in carbon tetrachloride,

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ACC NR: AT6034056

Freon 113, perfluorocyclobutane and benzene to determine the effect of solvent on reaction rate. Using a radical yield of 15-20 per 100ev for carbon tetrachloride, the relative radiation-chemical yields were calculated: $\text{TFC1E} = 3-4$; freon = 8; polyfluorocyclobutane = 3-4; and benzene = 0.2. Kinetics of the radiation polymerization were discussed and the kinetic equation for the reaction is given. Orig. art. has: 4 figures and 6 equations.

SUB CODE: 07/ SUM DATE: 25Jul66/ ORIG REF: 006/ OTH REF: 005
//

Card 2/2

VOLKOVA, Ye.V.

Species survey of the genus *Claytonia* Gronov. occurring in the
U.S.S.R. Bot. zhur. 49 no.12:1760-1768 D '64 (MIRA 18:2)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

GAL'PERIN, Ye.L.; DUBOV, S.S.; VOLKOVA, Ye.V.; MLENIK, M.P.

Crystalline structure of polytrifluorochloroethylene.
Kristallografiia 9 no.1:102-103 Ja-F '64.

(MIRA 17:3)

VOLKOVA, Ye. V.; FOKIN, A. V.; SOROKIN, A. D.; BULYGINA, L. A.

Polymerization of vinylidene fluoride subjected to the action
of gamma rays. Zhur. VKHO 7 no.5:593-594 '62. (MIRA 15:10)

(Vinylidene compounds) (Gamma rays)

S/844/62/000/000/079/129
D423/D307

AUTHORS: Volkova, Ye. V., Fokin, A. V., Zimakov, P. V. and Belikov, V. H.

TITLE: Certain special features of the radiation polymerization of tetrafluorethylene by the action of β and γ radiations

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 465-469

TEXT: Recent investigations are described of the radiation polymerization of TFE in the solid, liquid and vapor phases, using Co^{60} and Sr^{90} as the γ and β sources. Irradiation in the liquid phase was carried out at 20 - 25°C using CHCl_3 as the solvent with a dose-rate of 11 rad/sec. Conversion of monomer increased with increase of dosage and concentration of monomer. The polymer obtained (PTFE) contained up to 2% chlorine, which was explained by the fact that the CHCl_3 also participates in the reaction by interaction of

Card 1/2

Certain special features ...

S/844/62/000/000/079/129
D423/D307

radicals and chain breakage in the polymer, resulting in low-molecular weight PTFE. Experiments in the solid state were carried out from -80 to 0°C with dosages of 1×10^5 and 1×10^4 rad. Almost total conversion of monomer occurred after 200 min at -80°C and after 20 mins at 0°C. Exceptionally large yields were obtained in comparison with similar reactions of other unsaturated compounds. The existence of a radiation after-effect was confirmed, which continued over several hours after removal of the radiation source. Experiments in the gas phase showed the presence of an induction phase extending over several hours. After the appearance of solid PTFE the reaction velocity was increased. The temperature was maintained at 20 - 25°C and a Sr^{90} B source was used with a dose-rate of 5 rad/sec. Results indicated a high tendency of TFE towards radiation polymerization with a high yield (approx. 10^6 mol/100 ev absorbed). There are 5 figures and 1 table.

Card 2/2

S/844/62/000/000/078/129
D423/D307

AUTHORS: Volkova, Ye. V., Fokin, A. V. and Sorokin, A. D.

TITLE: Radiation polymerization of trifluorochlorethylene

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 460-464.

TEXT: The present work was carried out in view of the inconclusive results obtained by other workers on the radiation polymerization of F-containing unsaturated organic compounds. Experiments were carried out in stainless steel flasks. It was not possible to determine the initial velocity of polymerization but the relationship between velocity, temperature and radiation dosage was determined over linear sections of the kinetic curves corresponding to 5 - 20% conversion. It was established that polymerization takes place over a wide range of dosage and that it proceeds without a significant induction period. The power index of the velocity-dosage relationship varied from 0.35 to 0.5 for higher dosages, and the relationship was charac-

Card 1/2

Radiation polymerization of ...

S/844/62/000/000/078/129
D423/D307

teristic for chain reaction processes. The presence also of a radiation 'after-effect' was shown, which lasted over a period of 2 days. Between -21 and +60°C the rate of polymerization increased initially to a maximum at 35°C and then fell off, confirming the results obtained by Roberts. Over the temperature range studied, the radiation yield amounted to 27,000 mol/100 ev absorbed energy for a dose of 3×10^3 rad/hr. On increasing the temperature from 0°C to 35°C, a reduction in the molecular weight of the polymer was observed and this value was also reduced at higher doses. The experiments indicated that radiation polymerization of trifluorochlorethylene takes place by a chain process, originated by a radical mechanism. There are 5 figures.

Card 2/2

S/844/62/000/000/074/129
D214/D307

AUTHORS: Krasnousov, L. A., Zimakov, P. V. and Volkova, Ye. V.

TITLE: Some characteristics of the radiochlorination of benzene

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 426-429

TEXT: The initiation of the chlorination of C_6H_6 by γ , β , ir and uv radiation was studied. Irradiation of chlorine in benzene led to the dissociation of Cl_2 . Since C_6H_6 is a good energy carrier, this additional energy causes the intermediate chlorination products to isomerize, thus changing the isomeric composition of the final product - hexachlorocyclohexane. With γ rays, initiation occurs throughout the solution while uv and β rays are absorbed in the outside layers of the solution. Regardless of the radiation used, the α -isomer is the main product; its amount depends on the type of radiation (γ rays - 83.3%; β rays - 78%; uv - 73.8%; ir 67.0%). The per-

Card 1/2

Some characteristics of ...

S/844/62/000/000/074/129
D214/D307

centage of the δ isomer depends to a lesser extent on the type of radiation used and increases as the temperature is lowered. Radiochlorination also occurs in the solid phase but only to 1,2-dichlorocyclohexadiene-3,5. The reaction is progressive and is not a free radical process. The suggested mechanism is as follows: Cl_2 dissociates into Cl^\cdot , Cl^\cdot then reacts with C_6H_6 to give $\text{C}_6\text{H}_6^\cdot\text{Cl}$, which combines with Cl^\cdot to form $\text{C}_6\text{H}_6\text{Cl}_2$. This is repeated until $\text{C}_6\text{H}_6\text{Cl}_6$ is obtained. There are 2 figures and 1 table.

Card 2/2

41119

S/063/62/007/005/006/006
A057/A126

11 2014
AUTHORS: Volkova, Ye. V., Fokin, A. V., Sorokin, A. D., Bulygina, L. A.

TITLE: On the polymerization of vinylidenfluoride under the influence of γ -irradiation

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva imeni D. I. Mendeleeva;
v. 7, no. 5, 1962, 593 - 594

TEXT: Radiative polymerization "in bulk" of vinylidenfluoride was investigated and the obtained results compared with previous studies carried out with tetrafluoroethylene and trifluorochlorethylene. The rate of radiative polymerization under same conditions lies in the sequence tetrafluoroethylene > vinylidenfluoride > trifluorochlorethylene and the corresponding yields per 100 ev are 10^6 , 10^5 , and 10^4 molecules, respectively. The polymerization occurs in all cases with a high conversion rate, practically up to 100%. The present experiments were made in 25 ml 1X18H9T (1Kh18N9T) steel autoclave test tubes, using a Co^{60} source with a total capacity of 5,000 g.equiv. Ra. A considerable induction period, effected by impurities (especially oxygen), was observed and, therefore, the monomer purified before use. The latter was a commercial grade of 99.8% purity. The de-
Card 1/2

On the polymerization of.....

IS/063/62/007/005/006/006
A057/A126

pendence of the conversion upon the irradiation time was studied at 23°C with doses of 1, 5, 10, and 30 rad/sec and the rate of reaction determined from the inclination of the kinetic curves. The value of the radiation-chemical yield decreases with the dose capacity. An increase in temperature raises the rate of the radiation polymerization but for all investigated temperatures (-78, -20, 0, 23°C at 10 rad/sec) a maximum value was obtained after about 6 h. The total activation energy of radiative vinylidenefluoride polymerization was determined with 3.6 kcal/mole. The process occurs by a radical-chain mechanism.

SUBMITTED: May 12, 1962

Card 2/2

VOLKOVA, Ye.V.

1954-1955, 1956-1957, 1958-1959

Genus *Anethystea*. Flora SSSR 20:69-70 '54. (MLBA 7:7)
(Labiatae)

VOLKOVA, Ye.V.

A new species of the genus *Claytonia* Gronov. from the
Chukchi Peninsula. Bot.mat.Gerb. 20:139-141 '60.
(MIRA 13:7)

(Chukchi Peninsula—Spring beauty)

VOIKOVA, Ye.Ye.

Late results of reorganization in training subprofessional medical personnel under the new conditions. Med. sestra 19 no. 10:39-42
0 '60. (MIRA 13:10)

1. Ministerstvo zdravookhraneniya SSSR, Moskva.
(MEDICINE—STUDY AND TEACHING)

KAPLAN, S.I.; VOLKOVA, Yu.V.

Phase equilibrium in systems containing tetracycline. Antibiotiki 9
no.3:201-205 Mr '64. (MIRA 1:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

VOLKOVA, Z.A. (Moskva)

Effect of air temperature on the transformation and disintoxication
of aniline in the animal's body. Gig.truda i prof. zav. 2 no.4:30-36
Jl-Ag '58 (MIRA 11:9)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR i kafedra
promyshlennoy gigiyeny TSentral'nogo instituta usovershenstvovaniya
vrachey.

(ANILINE)

(TEMPERATURE--PHYSIOLOGICAL EFFECT)

MATSAK, V.G., kandidat tekhnicheskikh nauk; VOLKOVA, Z.A., kandidat
meditsinskikh nauk

Case of group poisoning from chlorine. Gig. i san. 21 no.9:70-71
S '56. (MLRA 9:10)

1. Iz Instituta gigiyeny truda i professional'nykh zabolevaniy
AMN SSSR.
(CHLORINE--TOXICOLOGY)

VOLKOV, Z.A.

SAVEL'YEVA, Z.D., kandidat meditsinskikh nauk; PRIVEZENTSEVA, S.N.;
VOLKOVA, Z.A., kandidat meditsinskikh nauk

Effect of working conditions on the course of gynecological diseases
and pregnancy. Sov.zdrav. 16 no.8:21-25 Ag '57. (MIRA 10:10)

1. Iz Instituta akusherstva i ginekologii Ministerstva zdravooku-
pasheniya RSFSR (dir. - dotsent L.G.Stepanov) i kafedry promyshlennoy
gigiyeny (zav. - prof. Z.D.Smelyanskiy) Tsentral'nogo instituta
usovershenstvovaniya vrachey

(INDUSTRIAL HYGIENE

eff. of working cond. in shoe factory on etiol. of
gyn. dis. & pregn.)

(PREGNANCY

eff. of working cond. in shoe factory)

(GYNECOLOGICAL DISEASES, etiol. and pathogen.
same)

"On the Determination of Toxicity of Color Developer," by
Z. A. Volkova, Candidate of Medical Sciences, Chair of Industrial
Hygiene Central Institute for the Advanced Training of Physicians,
Gigiyena i Sanitariya, Vol 22, No 5, May 57, pp 41-45

The work reports the results of experiments which were conducted to determine the toxicity of diethylparaphenylenediaminesulfate (TSS)--
 $C_{12}H_{18}N_2N(C_2H_5)_2 \cdot H_2SO_4$ -- now widely used as a color developer in color photography. The experiments established that the chemical is toxic to animals and in cases of acute intoxication affects the central nervous system. TSS may enter the organism in the form of dust or vapor through the respiratory passages and through the gastro intestinal tract. It is thought that it may also be absorbed through the skin. Repeated administrations of small doses of TSS to white mice produced modifications in the organs, the liver in particular. In pure form, TSS may cause skin affections (U)

Sum. 1.1.1.1.

SOV/137-59-1-1168

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 159 (USSR)

AUTHORS: Volkov, Yu. V., Volkova, Z. A.

TITLE: The Critical Specific Pressure as an Indicator of Wear Resistance
(Kriticheskoye udel'noye davleniye - pokazatel' iznosostoykosti)

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy
Oktyabr'sk. sots. revolyutsii. Nr 2. Tomsk, Tomskiy un-t, 1957,
pp 47-48

ABSTRACT: The authors investigated the wear resistance of some grades of steel and bearing bronze under the conditions of boundary lubrication. Specimens of variable (wedge-shaped) cross-sections worn against a super-smooth surface of a hard-alloy roller were used in the experiments. It was established that for each of the materials tested there exists a certain critical specific pressure which corresponds to the transition from a slow normal wear of the specimen to an extremely intense wear. The authors point out the connection between the critical pressure with respect to friction and certain mechanical properties of the material, namely, its hardness and crumbling strength under static loads.

Z. F.

Card 1/1

SOV/137-58-10-21606

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 164 (USSR)

AUTHORS: Volkova, Z.A., Volkov, Yu.V.

TITLE: An Investigation of Wear-resistant Properties of Steel 45 Under Certain Conditions of Boundary Friction (Issledovaniye iznosostoykosti zakalennoy stali 45 v nekotorykh usloviyakh granichnogo treniya)

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy Oktyabr'sk. sots. revolyutsii. Nr 2. Tomsk, Tomskiy un-t, 1957, pp 48-49

ABSTRACT: Wear-resistant properties of hardened 45 steel were investigated under conditions of boundary friction at sliding velocities of 0.44, 0.63, and 0.88 m/sec under loads which varied from 10 to 200 kg. The temperature is a paramount factor in determining the wear resistance of a steel. Under operating conditions involving temperatures due to friction not in excess of 350-400°C, the wear resistance of steel is a function of changes in its mechanical properties which occur as a result of tempering at various temperatures. Under operating conditions during which the temperature due to friction exceeds

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SOV/137-58-10-21606

An Investigation of Wear-resistant Properties of Steel 45 (cont.)

400°, the wear resistance of the steel increases as a result of regeneration phenomena occurring on the surface of friction and attains a maximum at a friction temperature of 800-900°, i.e., at a point when the surface of friction is completely coated with a regenerated layer.

I.B.

1. Steel--Mechanical properties
2. Steel--Temperature factors
3. Friction--Thermal effects
4. Abrasion--Test methods

Card 2/2

VOIKOVA, Z.A., Sand Tech Sci--(disc) "Study of the temperature effect ^{press} ~~press~~ ^{on} the friction and wearing out ~~process~~ in ^{boundary} lubrication."
Sverdlovsk, 1956. 15 pp (Min of Higher Education USSR. Ural Polytech Inst
in S.M.Kirov), 150 copies. Bibliography: 14-15 (EL, 44-51, 122)

- 3 / -

SOV/137-58-12-25179

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 163 (USSR)

AUTHORS: Volkova, Z. A., Volkov, Yu. V.

TITLE: Changes in the Carrying Capacity of Hardened Carbon Steel in Relation to Structural and Phase Transformations Under Marginal Friction
(Izmeneniye nesushchey sposobnosti zakalennoy uglerodistoy stali v svyazi so strukturnymi i fazovymi prevrashcheniyami pri granichnom trenii)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Fizika, 1958, Nr 1, pp 124-131

ABSTRACT: Results are reported on the investigation of wear resistance of St-45 steel quenched in water or oil and quenched in oil with tempering for 1 hour at 185, 350, and 550°C. The critical pressure, i.e., the carrying capacity of the material under friction (F) serves as the wear-resistance indicator. Blocks with two wedge-shaped supporting right-angle projections were used as specimens. A roller of VK-6 with a surface polished to class 12 - 13 of surface finish was used as the counterbody. It is shown that temperature is the most important factor in determining the carrying capacity of steel under F. Its effect is evident through the change of the physico-chemical properties

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Ural Polytech. Inst. in S. M. Kirov

SOV/137-58-12-25179

Changes in the Carrying Capacity of Hardened Carbon Steel in Relation to (cont.)

of the active surface layers caused by structural and phase transformations which take place in these layers in the process of F. In the $< 350 - 530^{\circ}$ temperature range the critical pressure changes with the change in the mechanical properties of steel acquired upon tempering at the respective temperatures. In the $> 350 - 550^{\circ}$ temperature range the critical pressure increases owing to the formation on the F surface of a bright, structurally homogeneous layer and attains its maximum at an F temperature in the vicinity of $Ac_1 - Ac_3$, when the whole F surface is covered with this layer.

A. N.

Card 2/2

VOLKOVA, Z.A.; SMELYANSKIY, Z.B., prof., red.; TIMKO, A.M., red.

[Meteorological conditions in industry and prophylactic measures] Meteorologicheskie usloviia na proizvodstve i mery profilaktiki. Moskva, TSentr. in-t usovershenstvovaniia vrachei, 1959. 23 p. (Lektsii po gigiene truda dlia vrachei SES i nachal'nikov MSCh, no.6) (MIRA 17:4)

VOLKOVA, Z. A.

"Strength and Gas Permeability of Filled Masses of Coke." Min Higher Education USSR,
Dnepropetrovsk Order of Labor Red Banner Metallurgical Inst imeni I. V. Stalin,
Dnepropetrovsk, 1952
(Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letonis', No. 32, 6 Aug 55

Volkova, Z.A.

✓ Properties of Different Size Fractions of Metallurgical Coke. A. S. Bruk and Z. A. Volkova. (Stal', 1955, (8), 888-892). (In Russian). An account is given of an investigation of the mechanical and aerodynamical properties of various size fractions of coke samples obtained from railway wagons or transporters conveying coke to blast-furnace plants. Coke in the size range 40-50 mm was found to have the best properties and a scheme for increasing the content of this range is proposed.—S. K.

VOLKOV, Z. A.

✓ 189. INFORMATION AND PROPERTIES OF BULK MASSES OF COKE. Volkova, Z. A.
(Sborn. trud Dnipropetrovsk. Metallurg. Inst. 1980. Dnipropetrovsk. Metallurg. Inst.)

ARONOV, Samuil Grigor'yevich; BAUTIN, Ivan Grigor'yevich; VOLKOVA, Zoya Andreyevna; VOLOSHIN, Arkhip Il'ich; VIROZUB, Yevgeniy Vladimirovich; GABAY, Lev Izrailevich, DIDENKO, Viktor Yefimovich; ZASHKVARA, Vasily Grigor'yevich; IVANOV, Pavel Aleksandrovich, KUSTOV, Boris Iosifovich [deceased]; KOTOV, Ivan Konstantinovich; KOTKIN, Aleksandr Matveyevich; KOMANOVSKIY, Maksim Semenovich; LEYTES, Viktor Abramovich, MOROZ, Mikhail Yakovlevich; NIKOLAYEV, Dmitriy Dmitriyevich, OBUKHOVSKIY Yakov Mironovich; RODSHEYN, Pavel Moiseyevich; SAPOZHNIKOV, Yakov Yudovich, SENICHENKO, Sergey Yefimovich; TOPORKOV, Vasily Yakovlevich; CHERMNYKH Mikhail Sergeyevich; CHERKASSKAYA, Esfir' Ionovna, SHVARTS, Semen Aronovich; SHERMAN, Mikhail Yakovlevich; SHVARTS, Grigoriy Aleksandrovich; LIBERMAN, S.S., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiiy redaktor

[Producing blast furnace coke of uniform quality; a collection of articles for the dissemination of advanced practices] Poluchenie donennogo koksa postoiannogo kachestva; sbornik statei po obmenu peredovym opytom. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 300 p. (MLRA 9:8)
(Coke industry)

SOV/68-58-12-2/25

AUTHOR: Obukhovskiy Ya.M. (Candidate of Technical Science) and
Volkova Z.A.

TITLE: Material Balance of Coking Coal Charges (Material'nyy
balans koksovaniya ugol'nykh shikht)

PERIODICAL: Koks i Khimiya, 1958, Nr 12, pp 5-7 (USSR)

ABSTRACT: It is pointed out that a material balance of the coking process presents an important method of assessing process losses and inaccuracies in reporting the outputs of coking products. The main difficulty in the preparation of such balances is lack of data on the amount of air drawn in, which increases the amount of gas produced, and the amount of pyrogenic water evolved during coking. It is proposed to correct the output of gas for drawn in air on the basis of nitrogen content in the coal charge, as generally 35% of nitrogen in coal is transferred into the gas. For the calculation of this correction the following formula is proposed:

$$V_{air} = (V_{gas} N_{gas} - \frac{0.35}{1.25} N_{coal} \cdot 1000) \frac{1}{79} \text{ m}^3/\text{ton of coal charged.}$$

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Where V_{air} -- amount of drawn in air/ton of coal as charged (including moisture), m^3 ; V_{gas} -- the yield of gas per ton

SOV/68-58-12-2/25

Material Balance of Coking Coal Charges

of coal charged together with drawn in air, m³; N_{gas} - nitrogen content in the gas, vol. %; 0.35 - coefficient determining the proportion of nitrogen in coal transferred to gas; 1.25 - the weight of 1m³ of nitrogen, kg; N_{coal} - nitrogen content of coal as charged, %; 1000 - the weight of charge for which the material balance is being calculated, kg; 79 - nitrogen content of air, vol.%. The yield of pyrogenic water can be calculated on the basis of the well established ratio of oxygen of pyrogenic water to oxygen of coal equals 0.55. The yield can be calculated from the following formula:

$$Wp.w. = 0.55 \cdot O_{coal} \cdot \frac{18}{16},$$

where: Wp.w. - the yield of pyrogenic water on coal as charged, %; O_{coal} - oxygen content of coal as charged, %; 18 - molecular weight of water; 16 - atomic weight of oxygen. Using above formula material balances for a number of coking works for 1957 were calculated (Table 2). The works were divided into two groups with and without coal washeries. Material balances for works without

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SOV/68-58-12-2/25

Material Balance of Coking Coal Charges

washeries were much closer than for works with washeries. It is pointed out that the latter works underestimate coke yields. If coke yields, calculated on the basis of a formula:

$$\text{coke yield} = \frac{100 - \text{Volatile in coal}}{100 - \text{Volatile in coke}} \times 100 + a$$

(where $a = 47.1 - 0.58 \frac{100 - \text{volatile in coal}}{100 - \text{volatile in coke}} \cdot 100$) are

substituted for the reported coke yields then better balances can be obtained (Table 3).

There are 3 tables and 5 references, all Soviet.

ASSOCIATION: Dnepropetrovskiy metallurgicheskii institut
(Dnepropetrovsk Metallurgical Institute)

Card 3/3

VOLKOVA, Z. A.

О КАТАЛИТИЧЕСКОМ ДЕЙСТВИИ
РАЗЛИЧНЫХ ВЕЩЕСТВ ПРИ ИМПЛИКАЦИИ
СЛОЖНЫХ ОРГАНИЧЕСКИХ ВЕЩЕСТВ
(НАМАЗИНЫ И ДР.)

А.С.Брызг, Л.А.Борисова, Е.М.Григорьев

VIII International Congress for General and Applied Chemistry in
Section of Chemistry and Chemical Technology of Paris,
publ. by Acad. Sci. USSR, Moscow 1979

abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 15 March 1979.

SOV/68-59-1-6/26

AUTHORS: Bruk, A.S., Doctor of Technical Sciences, Volkova, Z.A.,
Leybovich, R.Ye., Obukhovskiy, Ya.M., Candidates of
Technical Sciences and Leytes, V.A.

TITLE: Physico-mechanical and Physico-chemical Properties of
Narrow-size Fractions of Blast Furnace Coke (Fiziko-
mekhanicheskiye i fiziko-khimicheskiye svoystva uzkih
klassov domennogo koksa)

PERIODICAL: Koks i Khimiya, 1959, nr 1, pp 21 - 24 (USSR)

ABSTRACT: Properties of size fractions of coke: above 80 mm,
80-60 mm, 60-40 mm and 40-25 mm were investigated.
Mechanical properties were tested by standard drum tests
(GOST 5953-51); results are given in Table 1; coke
reactivity by reduction of carbon dioxide to monoxide
according to Ref 6; results - Table 2; the hardness of
the coke substance according to Ref 7; results - Table 3
and the degree of carbonisation of the coke by measurements
of its electro-conductivity, according to Ref 8;
results - Table 4. It was found that the quality of blast-
furnace coke is determined by properties of its individual
fractions and is non-uniform not only in respect of size
fractions but also in respect of other properties
characterising these size fractions such as strength,

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SOV/68-59-1-6/26

Physico-mechanical and Physico-chemical Properties of Narrow-size Fractions of Blast Furnace Coke

hardness, reactivity and the degree of carbonisation. Differences in properties of the individual size fractions of coke, while the quality of the coal blend remains constant, are determined by thermal conditions of coking. The most uniform in respect of all the properties tested are size fractions 60-40 and 80-60 mm. Separation of these most uniform fractions may secure the supply of blast furnaces with the most uniform fuel. There are 4 tables and 8 Soviet references.

ASSOCIATIONS: Dnepropetrovskiy metallurgicheskii institut (Dnepropetrovsk Metallurgical Institute); and Gosplan of the Ukrainian SSR (V.A. Leytes)

Card 2/2

SOV/68-59-8-2/32

AUTHORS: Volkova, Z.A. and Obukhovskiy, Ya.M.

TITLE: ~~Material Balance of Carbonisation of Coal Blends on~~
the Coking Works of the UkrSSR for 1958 (Material'nyy
balans koksovaniya ugol'nykh shikht na
koksokhimicheskikh zavodakh USSR za 1958 g)

PERIODICAL: Koks i khimiya, 1959, Nr 8, pp 5-6 (USSR)

ABSTRACT: It was established that, on coking blends from Donets
coals in silica ovens, on average 43.7% of oxygen from
coals is transferred into pyrogenic water (and not 55%
as was previously thought). A material balance of
coking blends on the Ukrainian Coking Works for 1958
is given in the form of a table. Unaccounted losses
varied on the individual works from 0.28 to 3.12%.
There is 1 table and 1 Soviet reference.

ASSOCIATION: Dnepropetrovskiy metallurgicheskii institut
(Dnepropetrovsk Metallurgical Institute)

Card 1/1

OBUKHOVSKIY, Ya.M., kand.tekhn.nauk; VOLKOVA, Z.A., kand.tekhn.nauk

Review of A.A.Agroskin's book "Thermal and electric properties of
coals." Koks i khim. no.4:63-64 '60. (MIRA 13:6)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Coal--Thermal properties)
(Coal--Electric properties)

BRUK, A. S.; OBUKHOVSKIY, Ya. M.; VOLKOVA, Z. A.; BELETSKIY, V. G.; ANTONOV, A. T.;
SHEVCHENKO, A. I.

Effect of bulk weight of coal charges on the mechanical properties
of coke. Koks i khim. no. 11:20-25 '60. (MIRA 13:11)

1. Dnepropetrovskiy metallurgicheskiy institut (for Bruk, Obukhov-
skiy, Volkova, Beletskiy). 2. Yasinovskiy koksokhimicheskiy zavod
(for Antonov, Shevchenko).

(Coke)

SHTROMBERG, B.I.;¹ MIROSHNICHENKO, A.M.; MOYSEYEVA, Kh.M.; KRIVOKON', Yu.G.;
BRUK, A.S.; VOLKOVA, Z.A.; GEYD, G.P.; OBUKHOVSKIY, Ya.M.

Investigation of the coals of the Lvov-Volyn' Basin. Koks i khim.
no.1:12-17 '61. (MIRA 14:1)

1. Ukrainskiy uglekhimicheskiy institut (for Shtromberg, Mirosh-
nichenko, Moyseyeva, Krivokon'). 2. Dnepropetrovskiy metallur-
gicheskiy institut (for Bruk, Volkova, Geyd, Obukhovskiy).
(Lvov-Volyn' Basin--Coal)

LETAVET, Avigust Andreyevich, prof., red.; KHUKHRINA, Yekaterina
Vladimirovna, prof., red.; VOLKOVA, Z.A., red.

[Control of dust formation in industry] Bor'ba s s pyl'eb-
razovaniem na proizvodstve. Moskva, Meditsina, 1964. 271 p.
(MIRA 18:2)

1. Akademiya meditsinskikh nauk, Moscow. 2. Deystvitel'nyy
chlen AMN SSSR (for Letavet).

VOLKOVA, Z.A.

[Vibration as an occupational hazard] Vibratsiia kak
professional'naia vrednost'. Moskva, TSentr. in-t
usovershenstvovaniia vrachei, 1963. 27 p.
(MIRA 17:11)